



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/875,335	06/06/2001	Harri Posti	930.330USW1	7525
32294	7590	10/18/2004	EXAMINER	
SQUIRE, SANDERS & DEMPSEY L.L.P.			BAYARD, EMMANUEL	
14TH FLOOR			ART UNIT	
8000 TOWERS CRESCENT			PAPER NUMBER	
TYSONS CORNER, VA 22182			2631	

DATE MAILED: 10/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/875,335

**Applicant(s)**

POSTI, HARRI

**Examiner**

Emmanuel Bayard

**Art Unit**

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 20-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 20-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

This is in response to amendment filed on 8/10/04 in which claims 20-38 are pending. The applicant's amendments have been fully considered but they are moot based on the new ground of rejection.

#### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 20-21, 23-25, 29-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dent U.S. patent No 6,553,229 B1 in view of Bach et al U.S. patent No 6,088,569.

As per claims 20 and 37-38, Dent discloses a receiver for receiving a plurality of different signals at the same time, said receiver comprising: means for identifying at least one strongest signal of said plurality of different signals (see abstract and col.3, lines 25-60 and col.4, lines 13-16, 59-63); and a filter for scanning the narrowband channel (see col.5, lines 59-63) frequency band of one of said at least one strongest signal with respect to the other of said plurality of signals.

However Dent does not teach a filter for attenuating only within a frequency band and adjustable to attenuate only within another frequency band of one of said at least one strongest signal with respect to the other of said plurality of signals, said filter having an input to receive said plurality of different signals and an output providing said

Art Unit: 2631

plurality of different signals with signals within said frequency band of said one strongest signal being attenuated.

Bach et al teaches a filter for attenuating only within a frequency band and adjustable to attenuate only within another frequency band of one of said at least one strongest signal with respect to the other of said plurality of signals, said filter having an input to receive said plurality of different signals and an output providing said plurality of different signals with signals within said frequency band of said one strongest signal being attenuated (see col.3, lines 50-61).

It would have been obvious to one of ordinary skill in the art to implement the teaching of Bach et al Into Dent as to determine the original desired signal bandwidth within the frequency bandwidths as taught by Bach (see col.4, lines 13-15).

As per claim 21, the receiver of Dent includes wherein the plurality of different signals are at different frequencies (see col.3, lines 35-60 and col.10, lines 30-35).

As per claim 23, Dent includes an analogue to digital converter (see col.7, line7). Furthermore implementing said A/D converter after being attenuated by said filter would have been obvious to one skilled in the art as to accurately identify the desired signal bandwidth.

As per claims 24-25 and 34 the receiver of Dent includes a down converter unit is provided for down converting said signals and the identifying means comprises means for measuring the strength of the signals at the base band (see col.7, line 7 and col.8, lines 18-25).

Art Unit: 2631

As per claims 29-30 and 36 the receiver of Dent includes a down converter unit (see fig.2 elements 12 or 16 and col.7, line 6) is provided for down converting said received signals to an intermediate frequency range, said down converter unit being arranged to receive a control signal (see fig.1 elements 14 or 17) from said identifying means for determining said intermediate frequency range, whereby said intermediate frequency range is determined by said identifying means based on the frequency of the strongest signal.

As per claims 31 and 35, Dent includes an oscillator for controlling the down-converter (see fig.2 element LO).

As per claim 32, Dent includes a first part for separating said signals and a second part for identifying the strongest signal (see col.6, lines 36-38 and col.8, lines 19-25).

As per claim 33, Dent includes a fast Fourier transform (see col.6, line 41 and col.7, line 30).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dent U.S. patent No 6,553,229 B1 in view of Dishal et al U.S. patent No 3,783,397.

As per claim 22, Dent teaches all the features of the claimed invention except a notch filter.

Dishal et al teaches a notch filter for attenuating frequency band (see col.3, lines 18-19).

It would have been obvious to one of ordinary skill in the art to implement the teaching of Dishal into Dent as to shift the frequency of all the received signals within the aforesaid broadband in order for the strongest signal to be shifted to a special frequency within the band of the processor as taught by Dishal (see col.3, lines 10-19).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dent U.S. Patent No 6,553,229B1 in view of Fischer et al U.S. Patent No 5,852,651.

As per claims 26, 27 and 28 Dent teaches all the features of the claimed invention except a splitter.

However the receiver of Fischer does include, a splitter (see fig.44 element 934) for dividing said signals, said splitter comprising a first output coupled to said identifying means and a second output coupled to a main signal path which includes said filter. Furthermore implementing the splitter of Fischer into Dent would have been obvious to one skilled in the art as to split the analog RF signal into N paths corresponding to

Art Unit: 2631

channels assigned to each of the antenna pairs as taught by Fischer (see col.32, lines 5-10).

### Conclusion

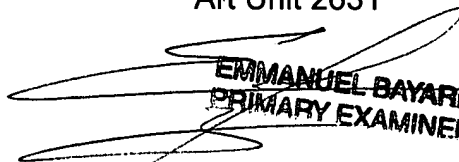
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel Bayard whose telephone number is 571 272 3016. The examiner can normally be reached on Monday-Friday (7:Am-4:30PM) Alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammed Ghayour can be reached on 571 272 3021. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Emmanuel Bayard  
Primary Examiner  
Art Unit 2631

10/14/04

  
EMMANUEL BAYARD  
PRIMARY EXAMINER